



Hillsboro Planning Department

DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

Adopted by the City Council and the Planning Commission pursuant to Subdivision Ordinance No. 2808 Article VI

Adopted by the City Council through Resolution No. 2219 July 16, 2007

Effective: August 16, 2007

Hillsboro Planning Department **Development Standards and Design Guidelines**

**(Adopted by the City Council and the Planning Commission
pursuant to Subdivision Ordinance No. 2808 Article VI)**

A. Purpose: These standards and guidelines are intended to insure project design and construction which:

1. Provides adequate, structurally sound public and private streets and utilities;
2. Allows logical, efficient development or redevelopment of adjacent properties;
3. Promotes a range of lot sizes, structural design, setbacks, and housing choices within new developments;
4. Respects surrounding context and enhances community character;
5. Considers security and privacy; and
6. Provides usable open space.

Except where the word “shall” is used, the standards and guidelines are not to be construed as mandatory. However, requests for exceptions or variances from these standards and guidelines will be reviewed in the context of the project’s overall consistency with their intent.

Although these standards are intended to apply primarily to single family and townhouse residential development, they may be applied by the Planning Commission or Planning Director (or the Director’s designee) to multi-family residential, commercial, industrial, or institutional development as applicable. If the application of these standards and guidelines conflict with more specific requirements in the Zoning Ordinance or other applicable regulations, the more strict standards shall apply.

B. Lot Dimension Variation Standards. The lot dimension variation requirements of this section are intended to encourage a variety of lot widths, areas, and setbacks, and providing developers flexibility in response to varying site conditions. These requirements are not intended to apply to townhouse or multi-family residential development.

1. The following standards shall apply on single family residential subdivisions or Planned Unit Developments of eight or more lots, outside areas designated Station Community Planning Area on the Comprehensive Plan Map:
 - a. At least 30 percent of the lots in the subdivision or PUD shall have areas which are below the average lot size in the applicable zone. Areas of such “compact lots” shall not be reduced below 75% of the average lot area of the applicable zone.
 - b. At least 30 percent of the lots in the subdivision or PUD shall have lot widths at the building line which are below the average lot width in the applicable zone. Widths of such “narrow lots” shall not be reduced below 75% of the average lot width of the applicable zone.
 - c. At least 30 percent of the lots in the subdivision or PUD shall have widths which are above the average lot width in the applicable zone.

- d. To create lots with varying areas and widths, lots depths within the subdivision or PUD may be varied below or above the average lot depth in the applicable zone.
 - e. The compact, narrow, wide and shallow lots required in sections a, b, c and d, above, should be dispersed throughout the development.
2. To ensure that new development in the Station Community Planning Areas includes variety within the allowed flexibility of the standards contained in Section 137 II., tentative plats for subdivisions or PUDs of eight lots or more in Station Community Planning Areas shall include a variety of lot widths and areas. At a minimum, the variation in area shall be 20% from the smallest to the largest lot, and the variation in width shall be 20% from the narrowest lot to the widest lot. These requirements are not intended to apply to townhouse or multi-family residential development.
 3. To ensure that new development is compatible with the historically diverse lotting patterns in the neighborhoods surrounding the downtown, tentative plats for subdivisions, PUDs of four lots or more, or two or more adjacent partitions by the same developer, zoned SCR-LD, SCR-MD, or SCR-DNC within the Downtown Station Community Planning Area shall include a variety of lot widths and areas. At a minimum, the variation in area shall be 20% from the smallest to the largest lot, and the variation in width shall be 20% from the narrowest lot to the widest lot. These requirements are not intended to apply to townhouse or multi-family residential development.

C. Setback Variation Standards. The setback variation requirements of this section are intended to encourage a wider range of structural design, setbacks, and housing choices within new development, and provide developers with flexibility in response to varying site conditions. The following standards shall apply on single family residential subdivisions or Planned Unit Developments of eight or more lots, outside areas designated Station Community Planning Area on the Comprehensive Plan Map. These requirements are not intended to apply to townhouse or multi-family residential development.

1. At least 40 percent of the lots in the subdivision or PUD shall have front yard setbacks less than the specified distance in the applicable zone. This reduced setback shall apply only to the residence portion of the structure which may not be reduced below 75% of the specified setback. Application of the reduction is restricted as follows:
 - a. Side street setbacks on corner lots in subdivisions which allow reduced setbacks shall not be further reduced;
 - b. Front yard setback of the garage portion of the structure shall not be reduced below 19 feet;
 - c. Adequate angles of repose are maintained for public and private utilities.
2. Side yard setbacks in all zones may be reduced to allow **load-bearing** architectural projections such as, but not limited to: bay windows; oriel windows; and alcoves. Such projections may extend up to four feet into the required setback, provided that:
 - a. A minimum three-foot setback is provided from the projection to the property line;
 - b. Architectural projections on adjacent structures are not aligned opposite one another;
 - c. The length of the architectural projection is not more than 25 percent of the length of the wall from which it projects; and
 - d. Adequate angles of repose are maintained for public and private utilities.

D. Public Utilities and Site Grading

1. Adequate public water, sanitary sewer and storm drainage facilities sufficient to serve the level of development approved shall be provided. The applicant shall demonstrate that adequate facilities and services are presently available or can be made available concurrent with development construction. Service providers shall be presumed correct in the evidence which they submit relating to the adequacy and availability of such facilities and services to the development. All facilities shall be designed to comply with adopted City standards. A development may be required to extend, modify or replace an existing off-site public water, sanitary sewer or storm drainage facility or system to the extent necessary to provide adequate public facilities or services to the development site. The development applicant may request from the City System Development Charge credits and/or City reimbursements for utility improvements or oversizing of facilities as may be required under this provision.
2. Structural footprints shall be sited to provide adequate area for installation and maintenance of public and private utilities in compliance with City standards. If necessary, the City may require preliminary development applications to provide detailed utility plans showing horizontal and vertical locations of public and private utilities to demonstrate adequate angles of repose, and may require additional setbacks or easement width to assure adequate separation of utilities before and after construction.
3. Unnecessary grade changes shall be avoided. Retaining walls shall be provided where needed and shall consist of such structural design and materials sufficient to serve their intended purpose. Grading and contouring shall take place with particular attention to minimizing the possible adverse effects of grading and contouring on the natural vegetation and physical appearance of the development site. It is the intent of this provision that, where minimizing such adverse effects of grading and contouring within the development site unavoidably results in creating physical barriers to pedestrian and bicycle circulation, priority shall be given to minimizing such adverse effects. However, the Planning Director shall work with the applicant to develop and apply practicable solutions whenever possible, taking into account the current and proposed use of the development site, that achieve both objectives. As used in this provision, "natural vegetation" does not include commonly recognized weeds and brush.
4. Grading and erosion control plans submitted with development applications shall include "shadow grading" plans showing how changes in site grade at the property line can be accommodated as necessary on adjacent property. Grade changes of one foot or more at the property line, or any grade change which reverses direction of site drainage at the property line shall be avoided.
5. Final construction drawings for development projects shall include grading plans confirming that site grading within the PUD will not impede or impound existing storm drainage from surrounding properties. If deemed necessary by the City Engineer, plans and construction drawings shall include drainage tiles, private storm lines or catch basins, or other alternative means to adequately convey the storm runoff away from adjacent properties to the new storm drainage lines in the development. Any drainage tiles, private storm drainage lines, catch basins, or other alternative improvements considered necessary by the City Engineer shall be included in project construction.

6. In areas identified as hazard areas by the Comprehensive Plan, development shall be designed to avoid unnecessary disturbance of natural topography, vegetation and soils. Designs shall minimize the number and size of cuts and fills, and any structural fill shall be designed in accordance with standard engineering practices by a civil or geotechnical engineer licensed by the State of Oregon. The Planning Director may impose such conditions as are necessary to minimize the risk of erosion, slumping, landslides and property damage.
7. Drainage shall be provided in accordance with City drainage master plan requirements and design standards. The Planning Director may impose conditions to ensure that waters are drained from the development site so as to limit degradation of water quality consistent with the Clean Water Service's Resolution and Order No. 91-47 as applicable within Hillsboro's City limits or any other - drainage standards as may be subsequently adopted by the City Council. Drainage plans shall be reviewed and approved by the City Engineer for conformance with the adopted City drainage standards prior to construction.
8. Any project which meets the definition of "development" as contained in Chapter 1 Section 1.02.15 of the *Washington County Clean Water Service's Construction Standards and Regulations Pertaining to the Sanitary Sewerage and Storm and Surface Water Management Systems, including Regulations for Erosion Control and Protection of Water Quality Sensitive Areas*, shall be reviewed for compliance with, and shall comply with the applicable provisions of Chapter 3, *Standard Design Requirements for Storm and Surface Water* of the CWS's Construction Standards and Regulations for Sanitary Sewerage and Storm and Surface Water Management Systems.
9. Surface stormwater retention, detention and treatment facilities shall be integrated into site landscaping, or placed underground. In campus developments, stormwater facilities should be consolidated to reduce the area devoted to such use. Consolidated facilities shall also be naturally integrated into the site design, landscaping and usable open space.
10. Except as noted below, all public utility distribution and service connections to new buildings and developments shall be underground. Aerial utility service (electricity, telephone, cable, etc.) may be used in new construction where all of the following circumstances apply:
 - a. The project is an in-fill building or dwelling within an existing neighborhood where utility service is provided aurally rather than underground;
 - b. The project is located between other utility uses on the same block face;
 - c. It would not be practicable to serve the new project underground without also serving the neighboring uses; and
 - d. The neighboring uses on the same block face and the utility company are unwilling to pay the additional cost of undergrounding their service(s).
11. Developments abutting streets or corridors where overhead utilities may be placed underground in the future shall install underground utility duct banks and/or vaults as specified by the utility companies to facilitate future relocation of such utilities.

E. Private Streets, Alleys, and Common Driveways. Private streets, alleys and common driveways constructed in subdivisions, minor or major partitions, or Planned Unit Developments shall comply with the following standards:

1. Common Driveways:

Minimum Pavement Width (1 lot)	10 feet
Minimum Pavement Width (2 lots)	15 feet
Minimum Pavement Width (3 to 6 lots)	20 feet
Minimum Improvement section (1 or 2 lots)	70,000 lb. axle load; 1 foot gravel shoulder on each side
Minimum Improvement section (3 to 6 lots)	city street section; standard crown; rolled curb on each side
Alternative improvement section	city street section; shed crown; rolled curb and 1-foot gravel shoulder
Water service	public water lines prohibited in improvements < 20 feet wide; public fire service prohibited in all common driveways
Drainage	Catch basins provided with curb only; provide laterals if curbs not constructed.

2. Private Street or Alley Sections serving front loaded units on each side:

Maximum capacity and length	lesser of either 12 units or 125 feet if dead-end; 25 units and 200 feet if open at both ends
Minimum tract width	22 feet. Adjustable only with approval of Engineering, Building, and Water Departments and all affected utilities
Associated PUEs	12 feet behind curb where franchise utilities locate; first 2 feet behind curb reserved for water only curbside PUE to include sidewalk and angle of repose easements Minimum width adjustable only with approval of Engineering, Building, and Water Departments and all affected utilities)
Minimum improvement width	20 feet with no on-street parking; 28 feet with single side parking; 32 feet with double side parking

Minimum improvement section	city street section; standard crown; rolled curbs (alternative section: city street section, shed crown; rolled curb and 1-foot gravel shoulder)
Drainage	Catch basins provided with curb only; provide laterals if curbs not constructed
Water service	public water lines and public fire service permitted if approved by Water Department
Sidewalks	Single side if total street length < 100 feet; both sides if street length > 100 ft. or if open at both ends
Street lights	Private: minimum 6 foot posts; 1 per lot; to be installed during home construction
Street trees	from City list, or as approved by Planning Director; planted with root barriers behind sidewalk or curb; plan to be approved during preliminary project review

3. Public or Private Alley Sections (outside SCPAs) serving front loaded or rear loaded units on each side:

Maximum capacity and length	lesser of either 12 units or 125 feet if dead-end; 25 units and 200 feet if open at both ends.
Minimum tract or R-O-W width	22 feet. Adjustable only with approval of Engineering, Building; and Water Departments and all affected utilities
Associated PUEs	12 feet behind curb @ side where franchise utilities locate; first 2 feet behind curb reserved for water only curbside PUE to include sidewalk and angle of repose easements (Minimum width adjustable only with approval of Engineering, Building, and Water Departments and all affected utilities)
Minimum improvement width:	20 feet, with no on-street parking (see Figure 1);
Minimum improvement section:	city street section; standard crown; rolled curbs (alternative section: city street section, shed crown; rolled curb and 1-foot gravel shoulder)
Water service	public water lines and public fire service permitted if approved by Water Department
Drainage:	Catch basins provided with curb only; provide laterals if curbs not constructed

Sidewalks:	single side if total street length < 100 feet; both sides if street length > 100 ft. or if open at both ends.
Street lights:	Private: minimum 6 foot posts; 1 per lot; to be installed during home construction
Street trees:	from City list, or as approved by Planning Director; planted with root barriers behind sidewalk or curb; plan to be approved during preliminary project review

F. Landscaping, Tree Preservation, and Usable Open Space

1. Landscaping in parking strips and common open space areas shall be installed according to plans approved by the City, prior to acceptance of public infrastructure. Landscaping shall be installed in all yards adjacent to a public or private street prior to final building inspections. Natural existing landscaping may be used to meet landscaping requirements. Landscape design and landscaping areas shall serve their intended functions and shall not adversely impact surrounding areas. Required landscaping shall include a mix of vertical elements (trees) and horizontal elements (grass, ground cover, etc.).
2. Site planning, including the siting of roadways, utility easements, and structures shall provide, wherever practicable, for the protection of trees eight-inch caliper or greater, measured four feet from ground level. Development approval may be conditioned to avoid disturbance to tree roots by grading activities and to protect trees and other significant vegetation identified for retention from harm. Such conditions may include the retention of a qualified consulting arborist or horticulturist both during and after site preparation, and a special tree maintenance and management program to provide protection to the trees as recommended by the arborist or horticulturist.
3. Usable open space improvements shall be sited and improved to provide active recreational and “third place” amenities intended to provide appropriate opportunities for physical activity and interaction among residents within a development. Except where inventoried Significant Natural Resources, 100-year floodplain, or delineated wetlands are present on site, 100% of required usable open space area shall be improved for active recreational and “third place” use.

Usable open space in residential subdivisions may include passive recreational areas only where inventoried Significant Natural Resources, 100-year floodplain, or delineated wetlands and wetlands buffers are present on site. Such areas or portions thereof may be counted toward the usable open space under the standards specified in Zoning Ordinance Section 127. III. H; Zoning Ordinance Section 137. XII. B. 3.; or Section Subdivision Ordinance Article II (7).

Development within areas designated as Town Centers or Main Streets on the Hillsboro 2040 Growth Concept Boundaries Map shall provide usable open space improvements which enhance the pedestrian environment and are appropriate to these higher density urban areas. Such improvements may include, but are not limited to, the following: hardscaped courtyards; weather canopies; water features and drinking fountains; benches or low walls with seating areas; free-standing planters; play structures; public art or other pedestrian space or design features integrated into the overall design of the development.

G. Fences, Walls, and Berms

1. Perimeter street fences and walls shall be installed by the developer prior to the acceptance of public infrastructure, according to the standards listed in the following table:

Project Character	Preferred Standard
Arterial or collector frontage; double front-loaded (garage and front door facing interior street)	<p>1st: masonry or brick walls; with anti-graffiti sealant; 2nd: solid wood fence with masonry or brick columns with cap board, and with anti-graffiti sealant;</p> <p>All fences to be six feet high except in vision clearance areas. Construction to include a minimum 3- foot wide landscaped strip between the sidewalk and the fence or wall.</p>
Arterial or collector frontage; rear loaded; (front door facing arterial or collector; garage facing interior street)	<p>1st: masonry or brick walls; 2nd: metal fence with masonry or brick columns; 3rd: solid wood fence with cap board.</p> <p>All fences to be four feet high except in vision clearance areas.</p> <p>Individual gates to be provided for single family dwellings; consolidated gates to be provided for multi-family or rowhouses.</p>
Neighborhood route or local street frontage; double front-loaded (garage and front door facing interior street)	Fences and walls discouraged as part of project construction.
Neighborhood route or local street frontage; front loaded; (garage and front door facing neighborhood route street)	Uniform fencing plan, to be approved during subdivision, PUD, or DR review.
Perimeter fence or wall adjacent to surrounding property (not street frontage)	Uniform fencing plan, to be approved during subdivision, PUD, or DR review.

2. Interior yard fences and walls shall be constructed during home construction, according to a uniform fencing plan approved during preliminary review.
3. As an alternative to perimeter fences or walls, projects may include perimeter berms. Such berms shall be a maximum six feet in height, with a maximum 25 percent slope. If approved, berms shall include the following improvements: stabilizing landscaping on all areas of the slopes; irrigation; and provision for drainage at the toe of all slopes.

H. **Street Trees** Subdivisions and Planned Unit Developments shall install street trees on public street frontages in compliance with the following standards:

Minimum size:	2 ½ inch caliper, measured 4 feet above grade
Distance and Spacing:	1 tree per lot frontage up to 40 feet; 2 trees per lot frontage 40 to 100 feet; otherwise 30 feet on center
Location:	in planter strip with property line sidewalks; 3 feet behind curb with curbtight sidewalks
Species:	from approved City list; or as approved by Planning Director
Specifications:	City approved root barriers and ground covers required. Plan to be approved during preliminary subdivision or PUD review.

I. **General Architectural Design and Construction – Single Family Residences and Duplex /or Two-Unit Townhouses**

1. **Detailing on Visible Elevations.** Buildings shall demonstrate variation and detailing on all elevations facing and visible from public or private streets, including elevations which may be separated from such streets by open areas such as rail rights-of-way, access streets, or parking lots. Street-side building elevations, except where required to be in conformance with the design standards of a SCPA Conservation District, shall be varied and articulated to provide visual interest to pedestrians and avoid a flat appearance. Street-side elevations of residential buildings shall incorporate discernible and architecturally appropriate features such as, but not limited to: cornices; extended side eaves; barge and fascia boards; changes in gable siding; belly bands; symmetrical windows; enhanced window trim and framing; bay windows; and wrap-around porches. Street side elevations of non-residential buildings shall incorporate discernible and architecturally appropriate features; such as, but not limited to: cornices; bases; display windows; ornamental masonry, belt courses; bays and recesses; arcades, unique entry areas or other treatments for visual interest.
2. **Use of High-Quality Materials.** Unless otherwise restricted by the design guidelines of a SCPA Conservation District, new buildings shall be constructed with exterior building materials and finishes of high quality to convey an impression of permanence and durability. Materials such as, and including, masonry, stucco, stone, cedar shakes and shingles, concrete or concrete-wood mix siding, articulated architectural concrete masonry units (CMU), and similar durable architectural materials are allowed. Materials such as, and including, T-111 siding, plain or plain painted plywood and strandboard sheets, EIFS siding, and similar exterior materials are prohibited.
3. **Non-repetitive Architecture.** Architecture in new residential developments will be evaluated during preliminary review as a combination of three primary features and three secondary features. The primary features are height/mass; setback from the street; and roof pitch/gable orientation. Secondary features are structure width, façade articulation, and color/materials/detailing. To avoid monotonous, repetitive architecture in new residential developments, the following standards should be applied on the front facades of all single family structures constructed in projects of eight or more lots:

- a. within each block face or eight-lot interval, whichever is less, no two adjacent houses shall repeat more than two of the three primary features. If two primary features are repeated in adjacent houses, then at least two of the three secondary features must be substantially different.
- b. within each block face or eight-lot interval, whichever is less, at least three different combinations of primary features should be present.

[This standard should be applied as follows: in an eight-lot interval, no two adjacent houses could have the same front setback, the same roof pitch and gable orientation, and the same height. If two adjacent houses were proposed to repeat any two of those three features, then two of the three secondary features (façade articulation, width, or color/materials/detailing) would have to be varied to meet the standard. Also in the eight-lot interval, at least three different front setbacks, heights, and roof pitch / gable combinations would be present.]

J. Crime Prevention Through Environmental Design (CPTED). Development applications shall demonstrate natural access control, natural surveillance, and territorial reinforcement:

- Natural access control – physical guidance of pedestrians and vehicles coming and going from an area through placement of entrances, exits, signs, fencing, landscaping and lighting.
- Natural surveillance - organization of physical features, activities, and people to maximize visibility through clear sight lines and definition of spaces.
- Territorial reinforcement – use of physical features expressing ownership (fences, pavement treatments, art, signage, and landscaping) to create a hierarchy of spaces: public; semi-private; and private.

Developments should use the following guidelines as appropriate for the specific project type. Other design guidelines may be used if the applicant can demonstrate that the alternative design equally or better meets the CPTED principles.

1. Site signage should provide information and orientation internally within the site and in reference to adjacent landmarks.
2. In commercial and industrial areas, external building features such as windows, doors, lighting and fencing should be designed and maintained to provide visibility to and from adjacent properties and the public right-of-way.
3. Points of entry and exit for pedestrians and vehicles should be clearly identified, and designed in a manner which encourages legitimate activity and discourages illegitimate activity.
4. Open spaces should be designed and maintained to provide enhanced visibility and minimize areas of entrapment or concealment. Narrow spaces with poor sight lines or expansive spaces with no definition among uses should be avoided.
5. Open spaces should be located within projects so that surrounding uses provide natural surveillance. If open spaces are behind buildings, low opacity fences, not walls, should be used to establish territory. Maximum natural surveillance should be provided in

children's play areas, but incompatible areas such as basketball courts and tot lots should be separated by distance.

6. Any open space parking areas should be located near streets for easy observation, and internal circulation systems for emergency vehicles should be designed into open spaces located away from streets. Bicycle paths should be located near park activities or on streets.
7. Landscaping should be designed and maintained to minimize concealment or entrapment, to eliminate potential for loitering or camping by transients, and to maintain clear sight lines from public streets to activity areas wherever possible.
8. Vehicular spaces should be designed to minimize vehicular/pedestrian conflicts, and provide safety features for pedestrians such as raised or separated sidewalks through parking areas and along building frontages.
9. Commercial and industrial buildings should enhance security through use of "invisible" measures such as shatter resistant glass, but avoid "fortress" features such as scissor gates and barbed wire.
10. Deep building entrances should be lighted and building numbers posted where clearly visible from the street or sidewalk.
11. Safety should be enhanced behind buildings with adequate lighting, limited access, signage; rear entrances for commercial activities, surveillance with windows or cameras. areas behind buildings, including storage and alleys, should be designed for visibility, security, and ease of on-going maintenance.
12. Trash receptacles should be designed in a manner that promotes on-going maintenance.
13. In residential developments, features such as front porches, back porches, and decks which encourage clear sight lines and natural surveillance of front yards, streets and alleys, sidewalks, and common open areas should be encouraged. Fences, hedges and walls that block street views on local streets and cul-de-sacs should be discouraged.
14. Sufficient lighting should be provided for both the sidewalk and the street, especially where these elements are separated.
15. Where appropriate, traffic calming measures such as on-street parking, gateway features, chokers, medians, and chicanes should be used to discourage through traffic on local streets.
16. Infill development should recognize the location of surrounding buildings and vehicular and pedestrian access routes to avoid creation of left over or limited use areas which could encourage concealment or entrapment.